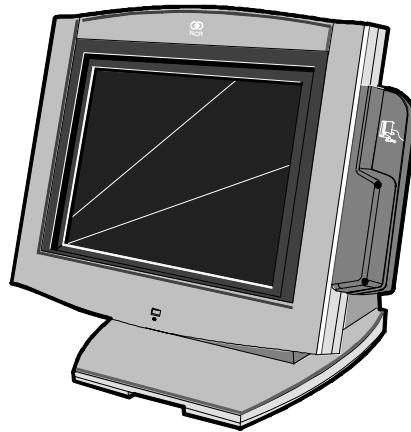


# **NCR 7454 Retail Terminal**

Release 2.2

## **Site Preparation Guide**



B005-0000-1257

Issue C

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It is the policy of NCR Corporation (NCR) to improve products as new technology, components, software, and firmware become available. NCR, therefore, reserves the right to change specifications without prior notice.

All features, functions, and operations described herein may not be marketed by NCR in all parts of the world. In some instances, photographs are of equipment prototypes. Therefore, before using this document, consult with your NCR representative or NCR office for information that is applicable and current.

To maintain the quality of our publications, we need your comments on the accuracy, clarity, organization, and value of this book.

Address correspondence to:

Manager, Information Products  
NCR Corporation  
2651 Satellite Blvd.  
Duluth, GA 30096

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Dayton, Ohio U.S.A.  
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# Preface

This is a contractual document. It contains important warnings and confers important legal rights and obligations. You are advised to read it carefully.

It is the responsibility of the customer to assure that all installation preparations are complete and in compliance with NCR specifications and requirements and all applicable national, state, or local codes, regulations, and laws.

## Safety Warnings

### *Servicing*

**Caution:** This product does not contain user serviceable parts. Servicing should only be performed by a qualified service technician.

### *Fuse Replacement*

**Caution:** For continued protection against risk of fire, replace only with the same type and ratings of fuse.

**Attention:** Pour prévenir et vous protéger contre un risque de feu, remplacer la fusible avec une autre fusible de même type, seulement.

### *Power Supply Cord Used as Disconnect Means*

**Caution:** The power supply cord is used as the main disconnect device. Ensure that the socket outlet is located / installed near the equipment and is easily accessible.

**Attention:** Le cordon d'alimentation est utilisé comme interrupteur général. La prise de courant doit être située ou installée à proximité du matériel et être facile d'accès.

### ***Lithium Battery Warning***

**Caution:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type as recommended by the manufacturer. The battery is battery is recyclable. At the end of its useful life, under various state and local laws it may be illegal to dispose of this battery into the municipal waste. Contact officials for recycling options or proper disposal.

**Attention:** Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

### ***Battery Disposal (Switzerland)***

Refer to Annex 4.10 of SR814.013 for battery disposal.

### ***IT Power System***

This product is suitable for connection to an IT power system with a phase-to-phase voltage not exceeding 240 V.

### ***Peripheral Usage***

This terminal should only be used with peripheral devices that are certified by the appropriate safety agency for the country of installation (UL, CSA, TUV, VDE) or those which are recommended by NCR Corporation.

**Caution:** DO NOT connect or disconnect a printer, keyboard, or any other terminal-powered peripheral while the terminal is powered on. Doing so may result in peripheral or system damage.

### ***System Weight Considerations***

**Warning:** The NCR 7454 terminal must be mounted securely to prevent a hazard and must be installed in accordance with local building codes. The wall on which the unit is mounted should be able to withstand four times the weight of the unit, which is approximately 20 lbs. (9 kg).

***Environmental Consciousness***

NCR is demonstrating its concern for the environment by designing an intelligent power management system into this terminal that operates efficiently whether the system is in a stand-alone or network environment.

***Grounding Instructions***

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician. Improper connection of the equipment-grounding conductor can result in a risk of electric shock.

The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor.

If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if you are in doubt as to whether the product is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the product's plug. **Repair or replace damaged or worn cords immediately.**

## About this Book

This book provides site preparation information for terminal components. Peripheral component and AC wiring site preparation information is NOT provided in this book. The associated reference documents are listed in the "Related Site Preparation Data" section.

This book contains the information necessary for the preparation of a site that conforms to NCR specifications. It is very important that the site complies with the requirements specified in the document because, once the equipment has been installed, deficiencies in site preparation or the problems caused by these deficiencies are much more difficult to detect and correct. Further, failure to comply with these requirements or to take proper steps to protect equipment against risks identified in this document may cause serious damage to the equipment and to the customer's business.

In addition to the need to comply with the requirements specified, electrical wiring and mechanical systems must also comply with all relevant codes, laws, and regulations.

It is important that a customer or his agent who is fully conversant with the special requirements of electronic equipment prepare the site. The responsibility of ensuring that the site is prepared in compliance with this document remains with the customer.

For information and guidance purposes only, a list is provided, in general terms, of those matters for which the customer is responsible. This list is not intended to be comprehensive, and in no way modifies, alters, or limits the responsibility of the customer for all aspects of adequate site preparation.

NCR staff will be available to answer questions relating to the contents of this document except where:

- A customer has been notified that a full or partial consultant service is available and /or that NCR will be willing to undertake a preliminary or final site survey and
- The customer shall have entered into a formal contract with NCR for provision of the same.

No comment, suggestion, or advice offered or not offered about preparation of the site, nor any inspection of the site, whether before or after preparation, is to be taken as approval of the location of the site and equipment or its preparation. NCR will not be liable in respect to any comment, suggestion, or advice given by its staff or in respect to any failure to give advice.

Finally, only the customer can know the full extent of damage that may be caused to his business by reason of failure of the equipment which is to be installed. For this reason, it is the customer's responsibility to ascertain the extent of any possible damage to his existing or planned business, and to effect full insurance in for all eventualities.

## References

- *NCR 7454 Retail Terminal Hardware User's Guide*  
(B005-0000-1256)
- *NCR 7454 Retail Terminal Hardware Service Guide*  
(B005-0000-1342)
- *NCR 7401 Web Kiosk/7454 Retail Terminal Parts Identification Manual*  
(B005-0000-1072)



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# Revision Record

| Issue | Date   | Remarks                                      |
|-------|--------|----------------------------------------------|
| A     | Sep 00 | First issue (Release 1.5)                    |
| B     | Feb 01 | Updated to Release 2.0<br>Added 2214 printer |
| C     | Dec 02 | Updated to Release 2.2                       |

# Radio Frequency Interference Statements

## Federal Communications Commission (FCC)

### ***Information to User***

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

NCR is not responsible for any radio or television interference caused by unauthorized modification of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by NCR. The correction of interference caused by such unauthorized modification, substitution or attachment will be the responsibility of the user. The user is cautioned that changes or modifications not expressly approved by NCR may void the user's authority to operate the equipment.

## Canadian Department of Communications

This Class A digital apparatus complies with Canadian ICES-003.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le règlement sur le brouillage radioélectriques édicté par le ministère des Communications du Canada.

## Voluntary Control Council for Interference (VCCI)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

## International Radio Frequency Interference Statement

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

# Declaration of Conformity

|                                   |                                                                                                             |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Manufacturer's Name</b>        | NCR Corporation                                                                                             |
| <b>Manufacturer's Address</b>     | NCR Corporation<br>Retail Solutions Division – Atlanta<br>2651 Satellite Boulevard<br>Duluth, GA 30096-5810 |
| <b>Type of Equipment</b>          | Information Technology Equipment                                                                            |
| <b>Model Number</b>               | Class 7454                                                                                                  |
| <b>Electrical Ratings (Input)</b> | 100-120 V / 200-240 V, 2.0 A / 1.0 A, 50-60 Hz                                                              |

NCR Corporation, 1700 South Patterson Boulevard, Dayton, OH 45459, USA, declares that the equipment specified above conforms to the referenced EU Directives and Harmonized Standards.

| <b>EU Directive</b>     | <b>Harmonized Standard(s)</b>                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------|
| 89/336/EEC (EMC)        | EN 55022: 1987 (CISPR 22)<br>EN 50082-1, Part 1: 1992<br>IEC 801-2: 1984<br>IEC 801-3: 1984<br>IEC 801-4: 1988 |
| 73/23/EEC (Low Voltage) | EN 60 950: 1992 + A1+A2:1993 + A3:1995                                                                         |

Director of Quality Assurance  
NCR Corporation  
Retail Solutions Division — Atlanta  
2651 Satellite Boulevard  
Duluth, GA 30096-5810

***European Contact:***

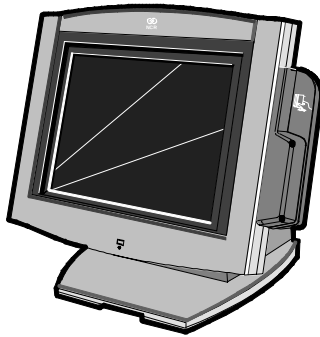
International IP Counsel  
206 Marylebone Road  
London, NW1 6LY, England



# Site Preparation

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## Introduction



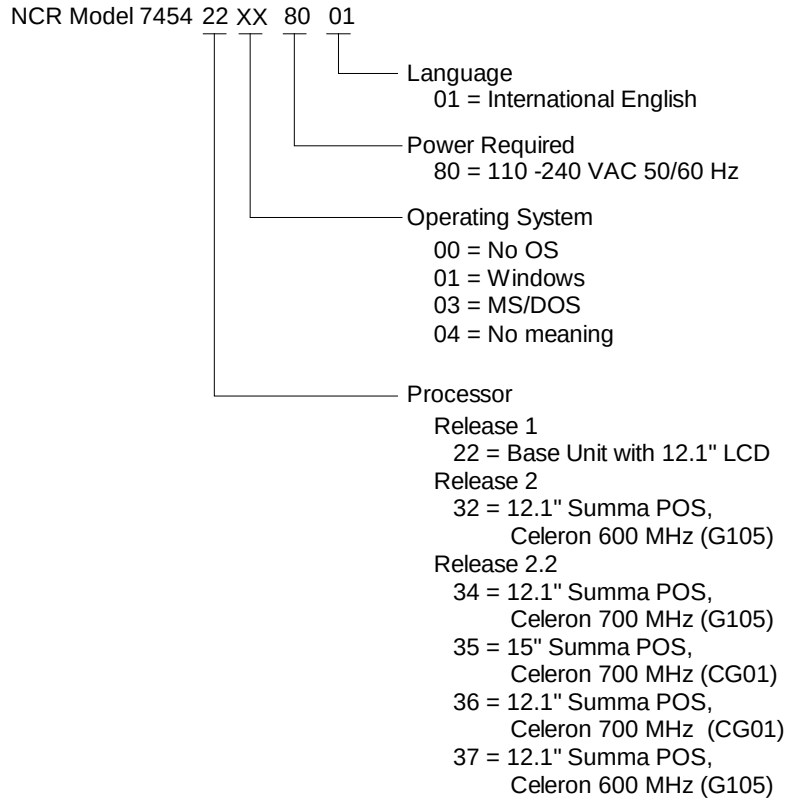
7454

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This document provides the information necessary to prepare a site to NCR specifications prior to installing a terminal. The site must be properly prepared before the terminal is installed because site preparation deficiencies may be difficult to detect and correct after installation.

The terminal consists of separate pieces that may be combined in a variety of configurations. Certain combinations are mutually exclusive. You must determine the equipment that will actually be installed before proceeding with the site preparation.

## Interpreting the Model Number



## Related Site Preparation Data

### AC Power and Communications Wiring

| Title                                    | Order Number |
|------------------------------------------|--------------|
| NCR Ethernet Communications Wiring Guide | BST0-2118-82 |
| NCR Terminal AC Power Wiring Guidelines  | BST0-2115-53 |

### Peripherals

| Title                                          | Order Number   |
|------------------------------------------------|----------------|
| NCR 7158 Thermal Receipt / Impact Printer      | B005-0000-1112 |
| NCR 7161 Thermal Receipt Printer Owner's Guide | B005-0000-1067 |
| NCR 7166 Thermal Receipt / Impact Printer      | B005-0000-1002 |
| NCR 7193 Thermal Receipt Printer Owner's Guide | BD20-1439-A    |
| NCR 7194 Thermal Receipt Printer Owner's Guide | B005-0000-1094 |
| NCR 7196 Thermal Receipt Printer               | B005-0000-1170 |
| NCR 5972 2x20 Customer Display User's Guide    | BD20-1372-A    |

## Accessing Information Products

Electronic versions (PDF format) are available on the Web at the following locations:

- <http://info retail.AtlantaGA.NCR.COM> (NCR only)
- <http://www.info.NCR.COM> (Anyone)

## Customer Responsibilities

Before the system can be installed, the customer must do or provide the following:

- When required by NCR, provide the NCR Customer Services representative with appropriate drawings that indicate:
  - Location of the equipment
  - Site wiring (power and communications, paths and lengths)
  - Location of other equipment that may generate electrical noise, electromagnetic interference, or heat.
- Make building alterations necessary to meet wiring and other site requirements
- Provide and install all communications cables, wall jacks, special connectors, and associated hardware
- Provide and install necessary power distribution boxes, conduits, grounds, lightning protection devices, and associated hardware
- Make sure all applicable codes, regulations, and laws (including, but not limited to, electrical, building, safety, and health) are met
- Provide and install auxiliary power or other equipment as required
- Provide storage or service areas as required
- Meet all system / unit environmental requirements
- Provide and install floor coverings and environmental systems that limit or control static electricity build-up and discharge

In general, keep the NCR equipment area free from dust, smoke, lint, and other particles. Restrict smoking, eating, and drinking around the equipment. Avoid locating the equipment near other machines that generate ink, carbon, and paper dust particles.

Finally, only the customer can know the full extent of the damage that may be caused to his business by reason of failure of the equipment that is to be installed. For this reason, it is the customer's responsibility to ascertain the extent of any such possible damage to his existing or planned business, and to effect full insurance for all eventualities.

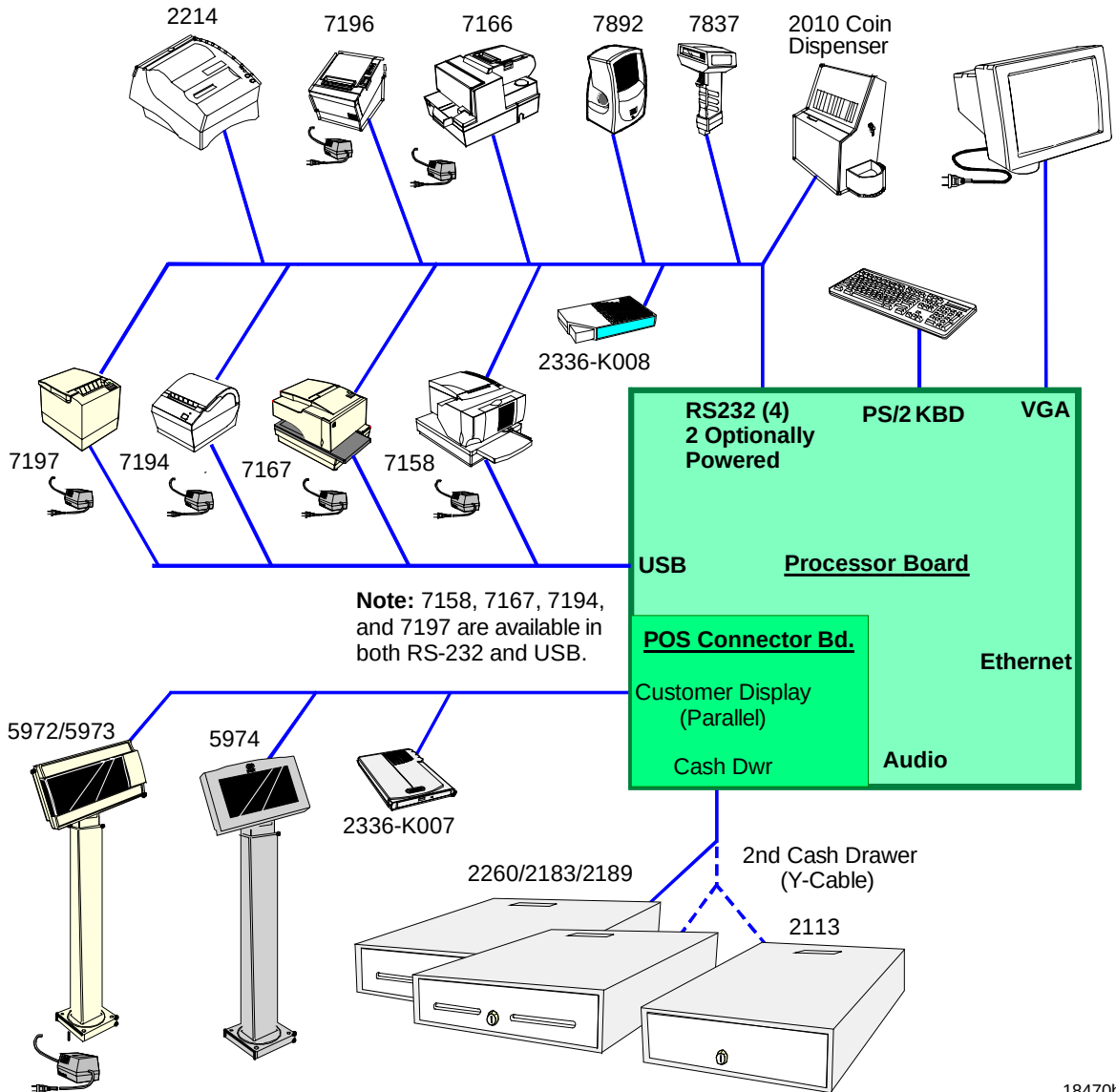
## AC Store Wiring Requirements

The customer must provide suitable AC power for the retail terminals, associated equipment, and devices. A dedicated unswitched power line dedicated to the NCR equipment installation is recommended. Refer to the Workstation and Peripherals AC Wiring Guide (BSTO-2115-53) for store AC wiring requirements. The AC outlet must be installed near the retail terminal and easily accessible to the operator.

## LAN Communications

The terminal supports Ethernet 10 / 100 Base local area network (LAN) communication protocol. For Ethernet communications wiring specifications, refer to the *NCR Ethernet Wiring Guide* (BSTO-2118-82).

# System Configuration Diagram



# Physical Considerations

This section presents the following retail terminal information:

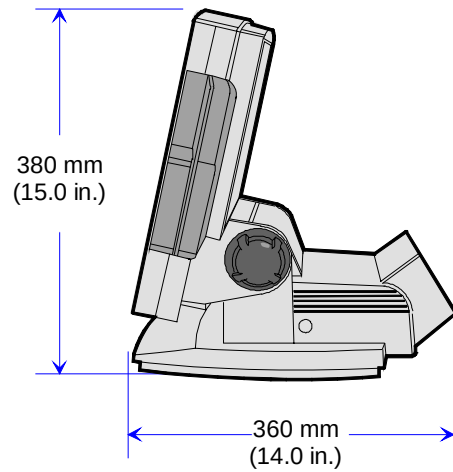
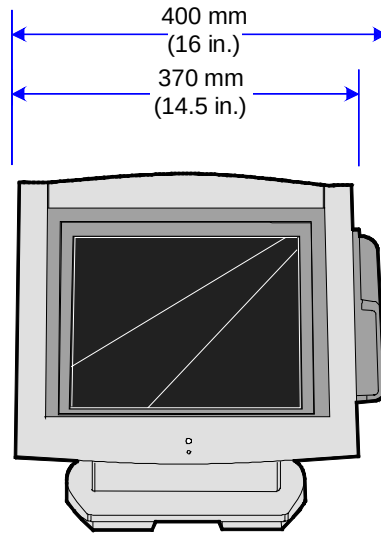
- Operating and service clearance requirements
- Display mounting considerations
- Retail terminal and component dimensions
- Component weights
- Airflow requirements
- Power requirements

## Operating and Service Clearance Requirements

| Location   | Component                | Distance          | Reason                           |
|------------|--------------------------|-------------------|----------------------------------|
| Above      | 2214 Printer             | 371 mm (14.6 in.) | Clearance to raise printer cover |
|            | 7158 Printer             | 305 mm (12 in.)   | Clearance to raise printer cover |
|            | 7166 Printer             | 280 mm (11 in.)   | Clearance to raise printer cover |
|            | 7167 Printer             | 305 mm (12 in.)   | Clearance to raise printer cover |
|            | 7194 Printer             | 228 mm (9 in.)    | Clearance to raise printer cover |
|            | 7196 Printer             | 254 mm (10 in.)   | Clearance to raise printer cover |
|            | 7197 Printer             | 267 mm (10.5 in.) | Clearance to raise printer cover |
|            | CRT Displays             | 50 mm (2 in.)     | Clearance for CRT tilt           |
|            | 5972-1000 2 x 20 Display | 25 mm (1 in.)     | Clearance for display tilt       |
|            | All units                | 153 mm (6 in.)    | Service clearance                |
| Left Side  | 7156 Printer             | 305 mm (12 in.)   | Clearance slip insertion         |
|            | 7167 Printer             | 305 mm (12 in.)   | Clearance slip insertion         |
|            | All units                | 153 mm (6 in.)    | Service clearance                |
| Right Side | CRT Display              | 64 mm (2.5 in.)   | Clearance for CRT rotation       |
|            | 5972 2 x 20 Display      | 25 mm (1 in.)     | Clearance for display rotation   |
|            | All units                | 202 mm (8 in.)    | Service clearance                |
| Front      | 7156 Printer             | 40 mm (1.5 in.)   | Clearance to open printer door   |
|            | Drawer unit              | 330 mm (13 in.)   | Clearance to open drawer         |
| Behind     | CRT Displays             | 64 mm (2.5 in.)   | Clearance for CRT tilt           |
|            | All units                | 153 mm (6 in.)    | Service clearance                |

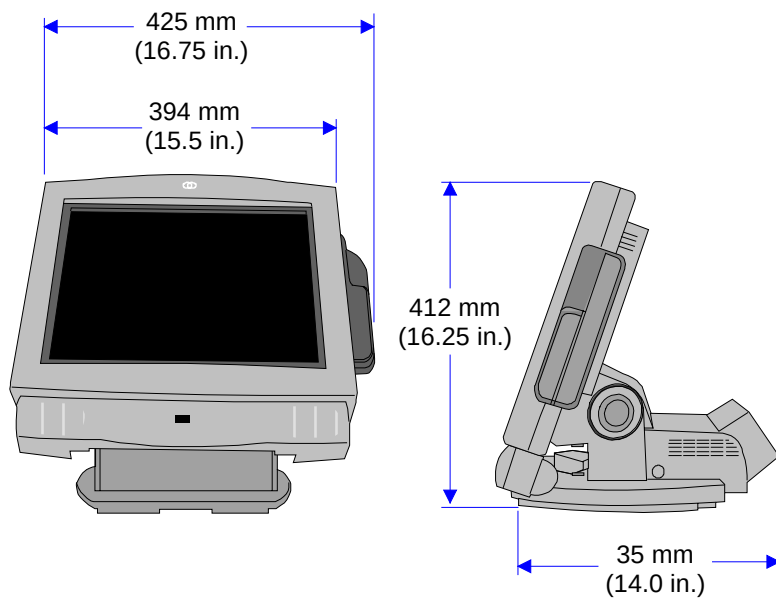
## Component Dimensions

**NCR 7454 (12.1 Inch)**

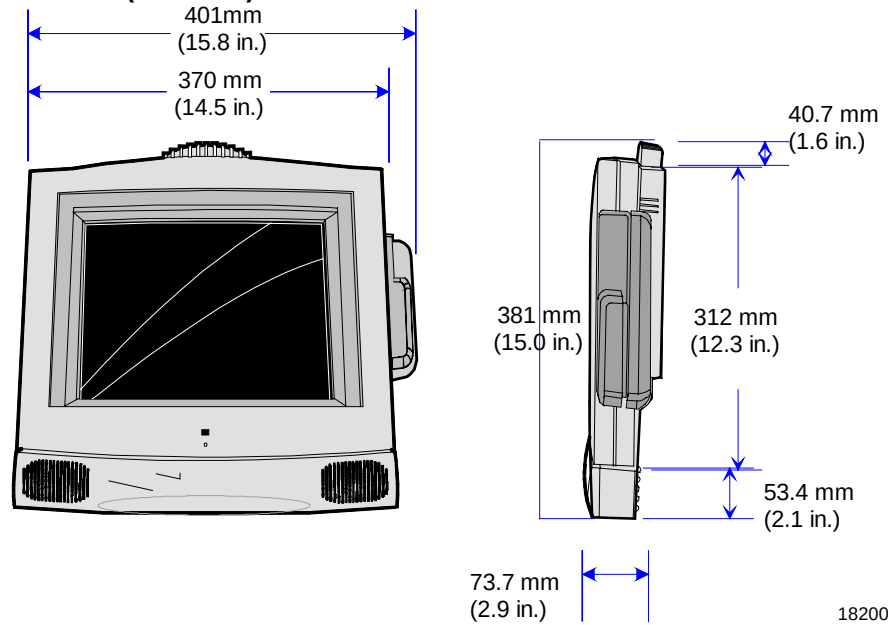


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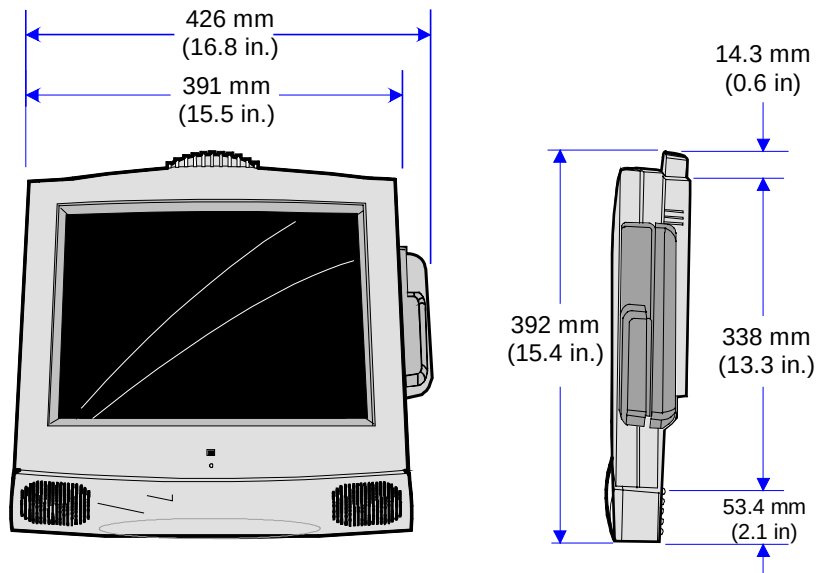
### NCR 7454 (15 Inch)



18134

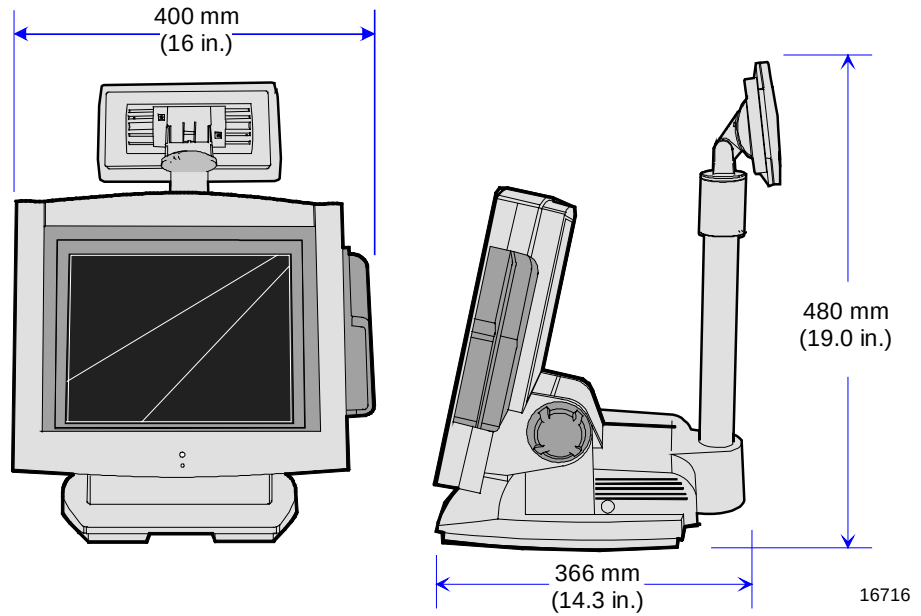
**NCR 7454 (12.1 Inch) with PCMCIA**

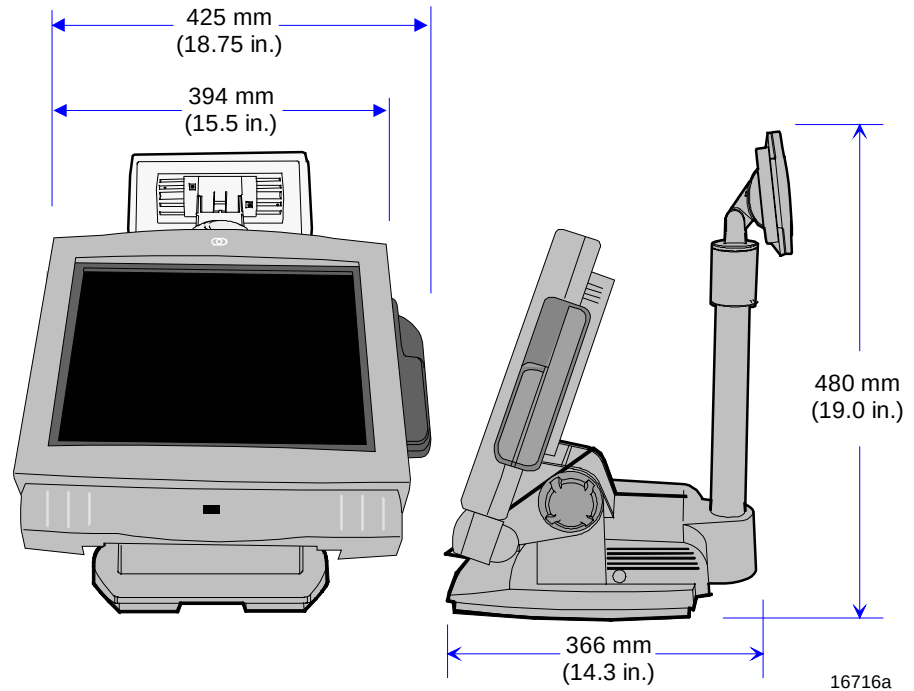
18200

**NCR 7454 (15 inch) with PCMCIA**

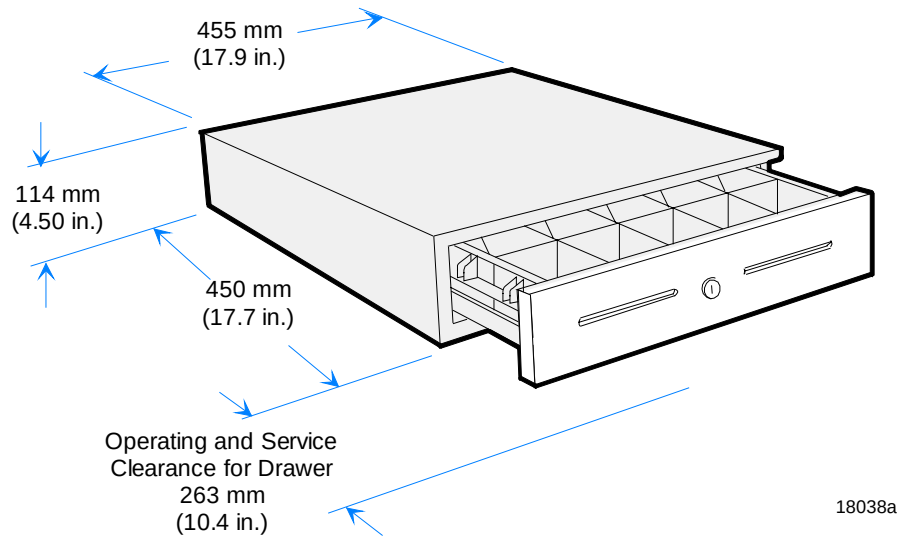
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### NCR 7454 (12.1 Inch) w/K450 Integrated Customer Display

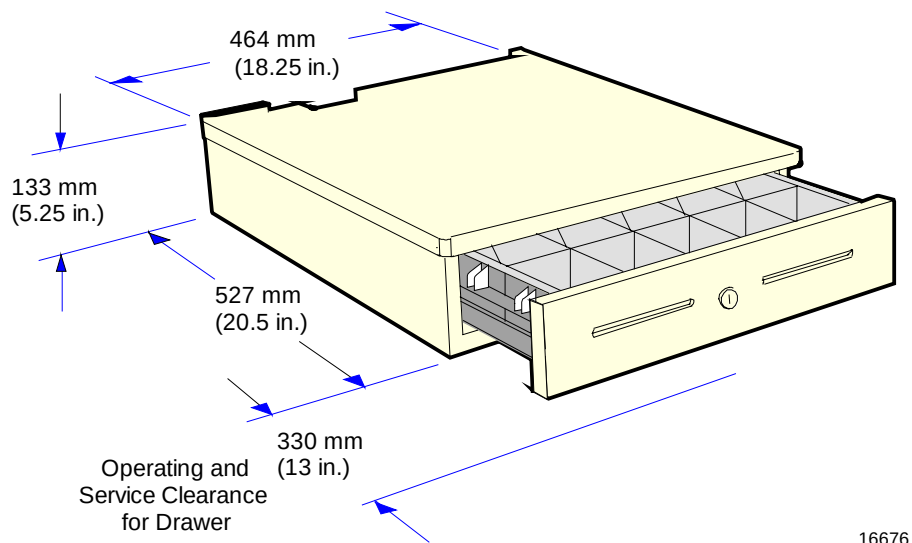


**NCR 7454 (15 inch) w/K450 Integrated Customer Display**

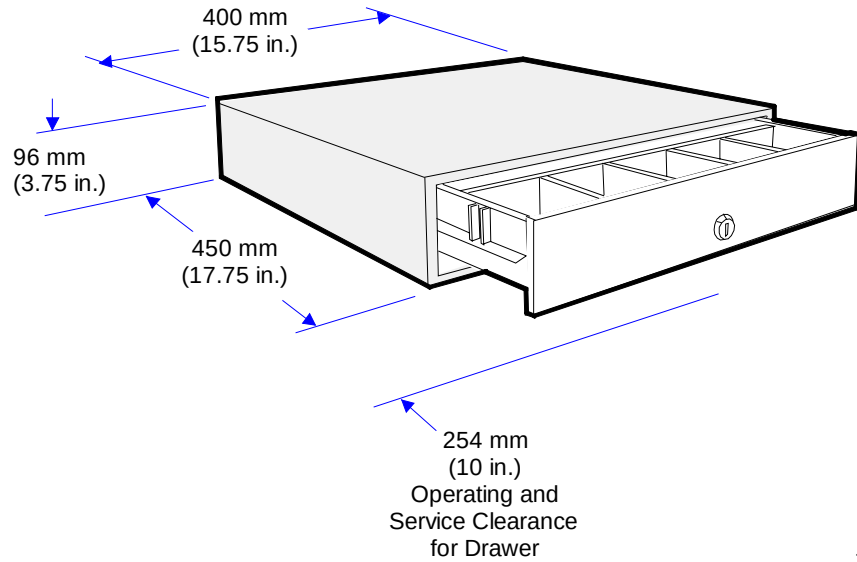
### NCR 2183 Cash Drawer



### NCR 2189 Cash Drawer

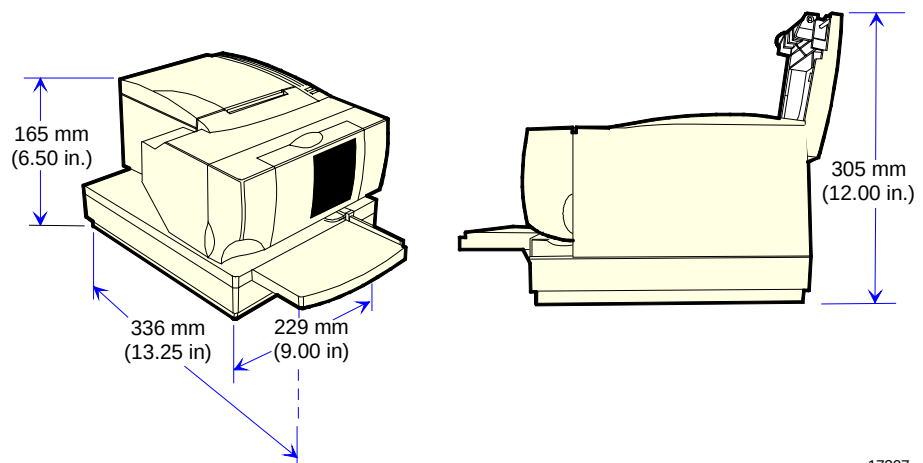


## NCR 2113 Cash Drawer



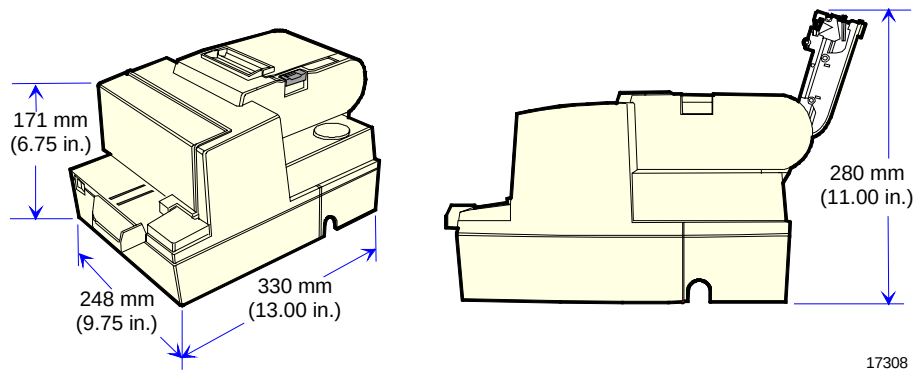
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## NCR 7158 Printer

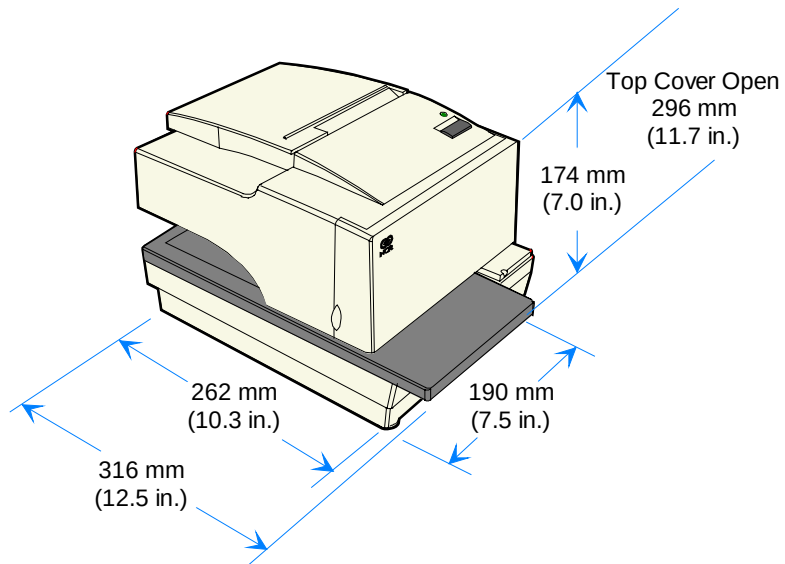


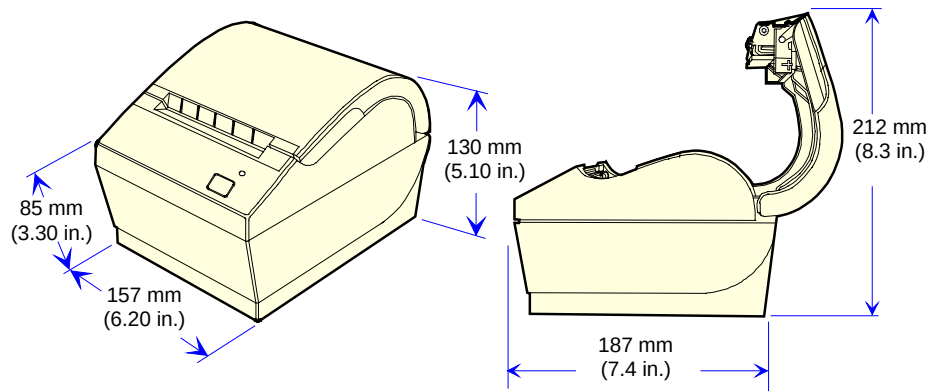
17307

## NCR 7166 Printer

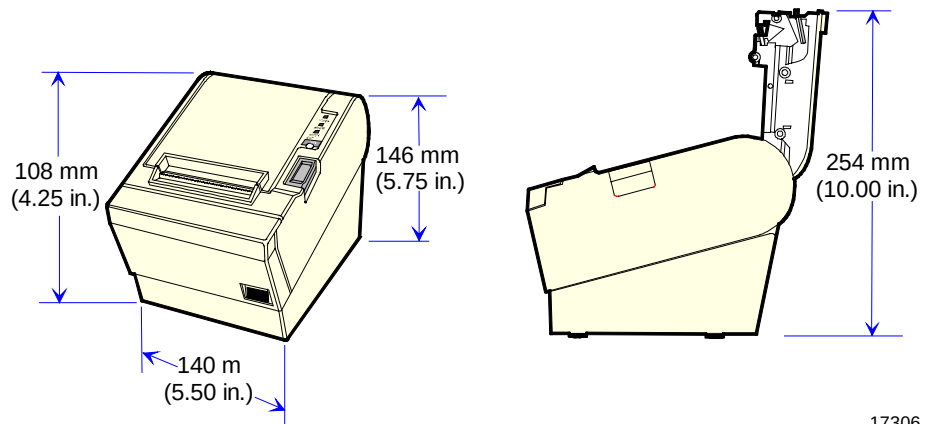


## NCR 7167 Thermal Receipt and Impact Slip Printer



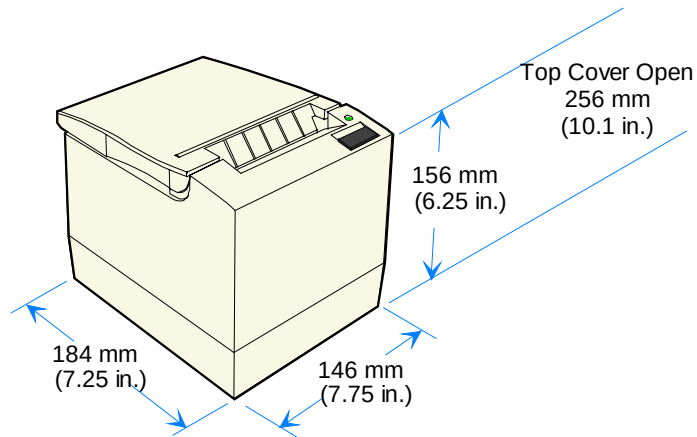
**NCR 7194 Printer**

16492

**NCR 7196 Printer**

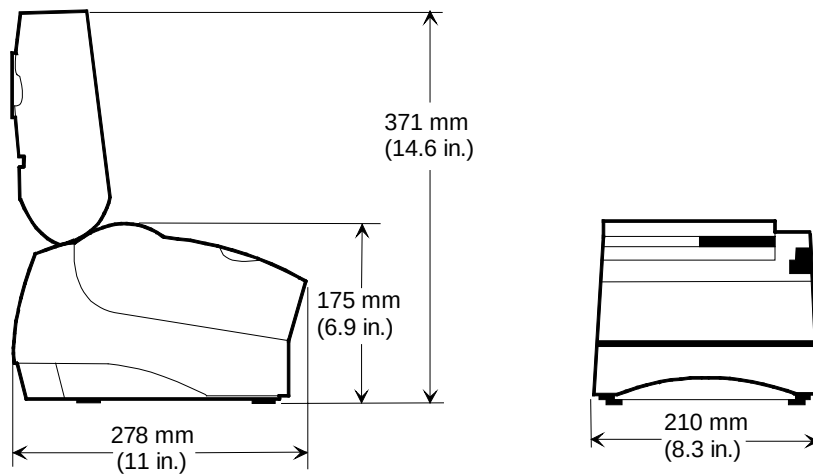
17306

## NCR 7197 Thermal Receipt Printer



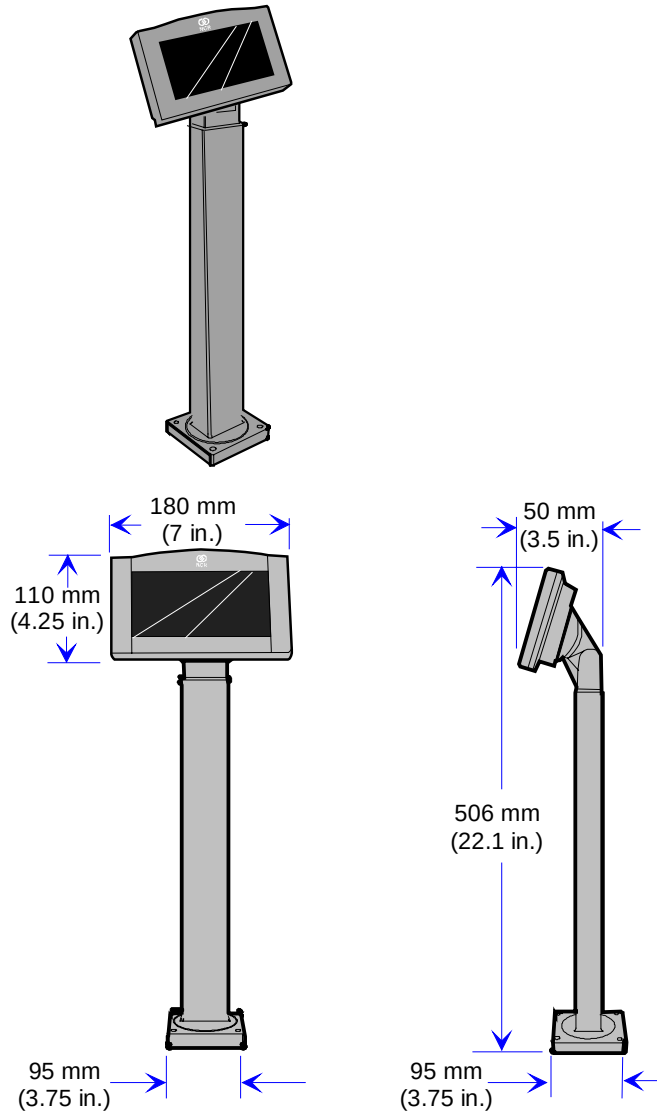
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## NCR 2214 Thermal Fiscal Printer

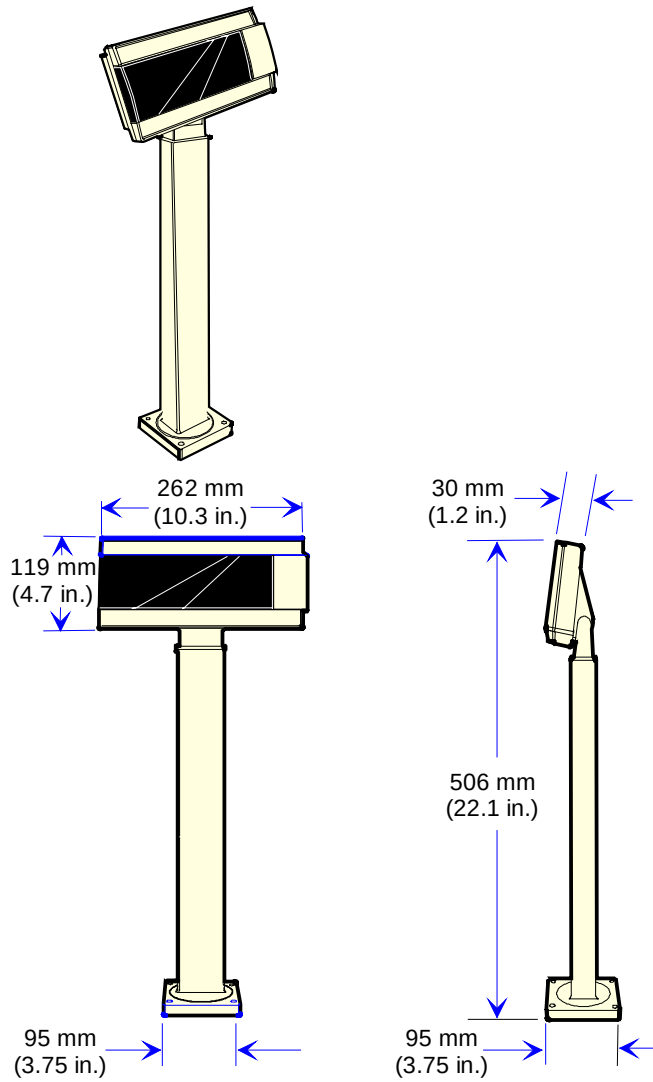


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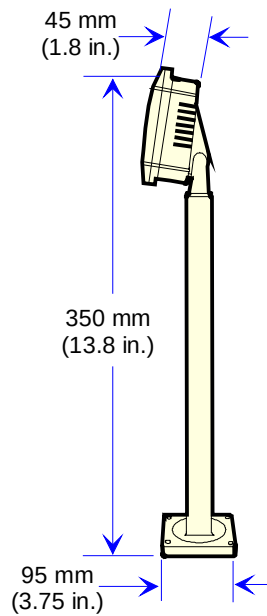
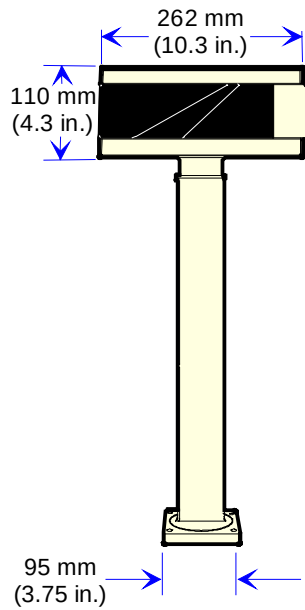
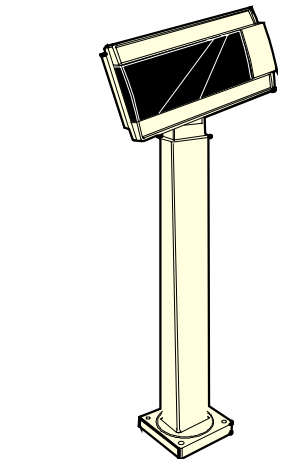
## NCR 5974 4x20 Remote Customer Display



## NCR 5972-1000 2x20 Remote Customer Display

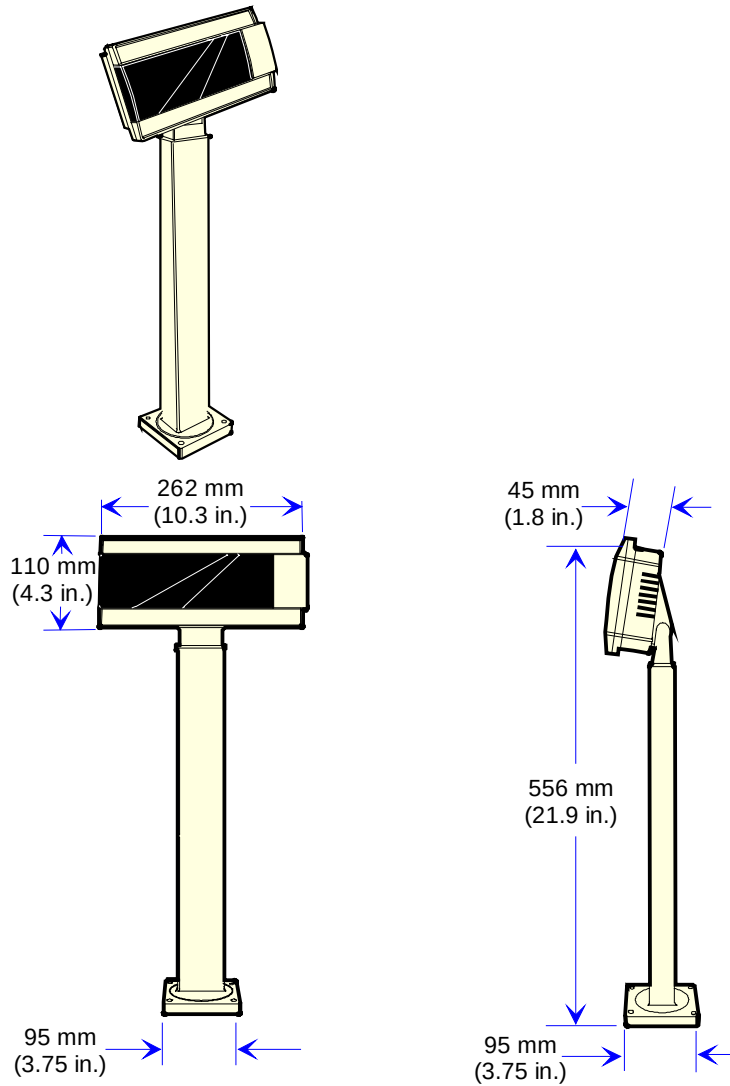


## Integrated 5973 International VFD Customer Display

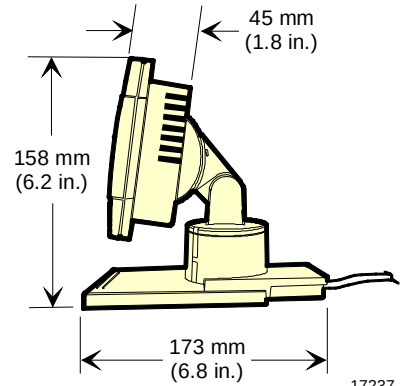
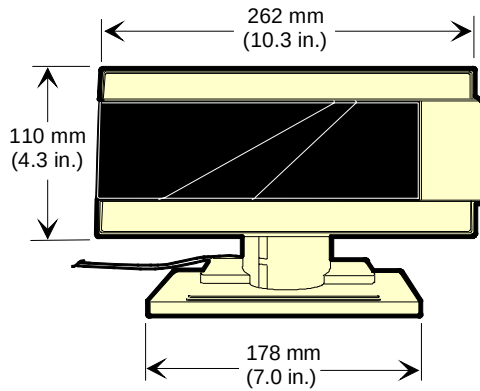
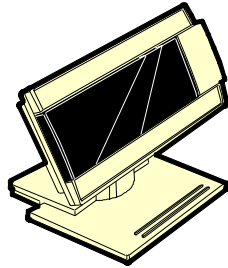


17236a

## 5973 International VFD Customer Display

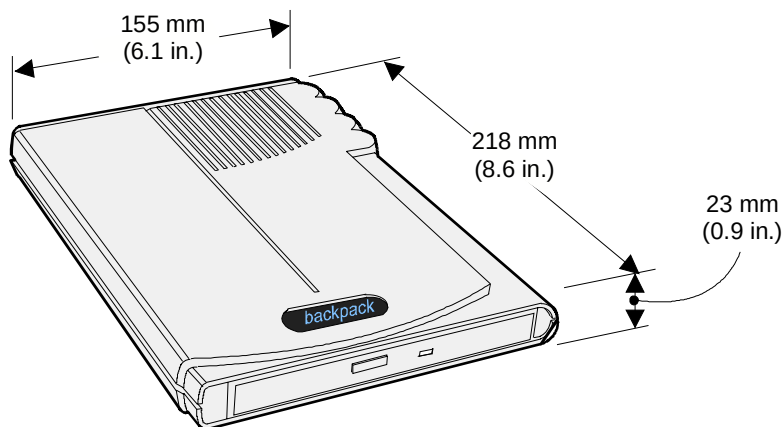


## Remote 5973 International VFD Customer Display



17237

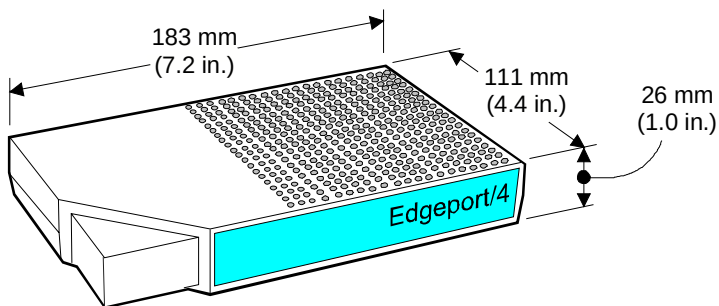
### NCR 2336-K007 External CD-ROM Drive



16951

**Note:** Allow 75 mm (3 in.) clearance in the back of the NCR 2336-K007 External CD-ROM Drive for connector and cable clearance.

### NCR 2336-K008 USB RS-232 Port Server



16950

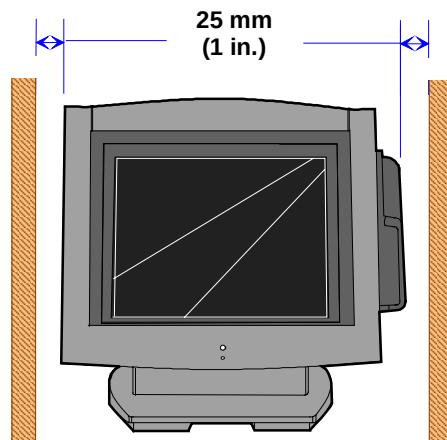
## Component Weights

The following table shows the weight of the 7454 retail terminal components.

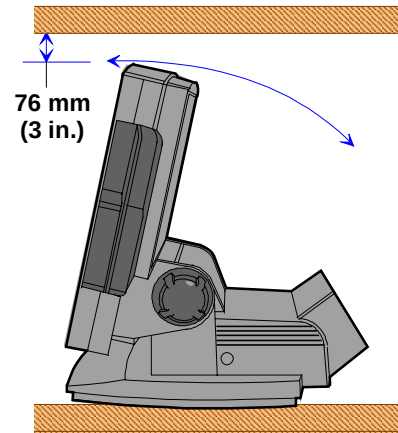
| Retail Terminal Component                  | kg   | lbs.  |
|--------------------------------------------|------|-------|
| 2189 Cash Drawer                           | 9.5  | 20.9  |
| 7454-K005 Cash Drawer                      | 11.4 | 25.15 |
| 7454-K453 Remote Customer Display          | 0.7  | 1.5   |
| 5972-1000 Remote Customer Display          | 0.7  | 1.5   |
| 7156 Multifunction Printer                 | 4.1  | 9.1   |
| 7158 Receipt/Impact Printer                | 4.8  | 10.5  |
| 7166 Receipt/Impact Printer                | 5.6  | 12.3  |
| 7167 Thermal Receipt & Impact Slip Printer | 4.5  | 10    |
| 7194 Thermal Receipt Printer               | 1.3  | 2.8   |
| 7196 Thermal Receipt Printer               | 1.8  | 3.4   |
| 7197 Thermal Receipt Printer               | 1.53 | 3.4   |
| 2214 Thermal Fiscal Printer                | 3.6  | 7.9   |
| 2336-K007 External CD-ROM Drive            | 0.6  | 1.3   |
| 2336-K008 USB RS-232 Port Server           | 0.3  | 0.6   |

## Ventilation Clearance

The following illustration shows the minimum clearances for proper cooling.



**Minimum Horizontal**



**Minimum Vertical**

16418

## Power Requirements

Core module contain a three-wire, single-phase, selectable 120 / 240 volt AC, 85 Watt power supply. The supply powers the retail terminal, scanner, VFD display, keyboard, USB interface, cash drawer, integrated speakers, and PCMCIA cards.

The following tables show operating specifications for the power supply.

### Maximum Input Power Specifications

|                        | 120 Volt     | 240 Volt      |
|------------------------|--------------|---------------|
| Voltage Ranges         | 90 - 136 VAC | 198 - 257 VAC |
| Frequency              | 50 / 60 Hz   | 50 / 60 Hz    |
| Current (A)            | 2.5          | 1.25          |
| Power (W)              | 85           | 85            |
| Power Factor (typical) | 0.48         | 0.38          |

### Typical Power Requirements

| 7454 Configuration                    | Retail Terminal Condition | Amps | Watts |
|---------------------------------------|---------------------------|------|-------|
| 120 Volt<br>12.1" LCD<br>600 MHz PIII | Soft OFF (Sleep Mode)     | 0.33 | 39.6  |
|                                       | Idle (Power On)           | 0.51 | 61.2  |
|                                       | Active, during scanning   | 0.55 | 66    |
| 240 Volt<br>12.1" LCD<br>600 MHz PIII | Soft OFF (Sleep Mode)     | 0.17 | 39.6  |
|                                       | Idle (Power On)           | 0.26 | 61.2  |
|                                       | Active, during scanning   | 0.28 | 66    |

## 7454 Power Consumption Matrix

The following table is provided as a reference of the power consumption of the peripherals available on the 7454

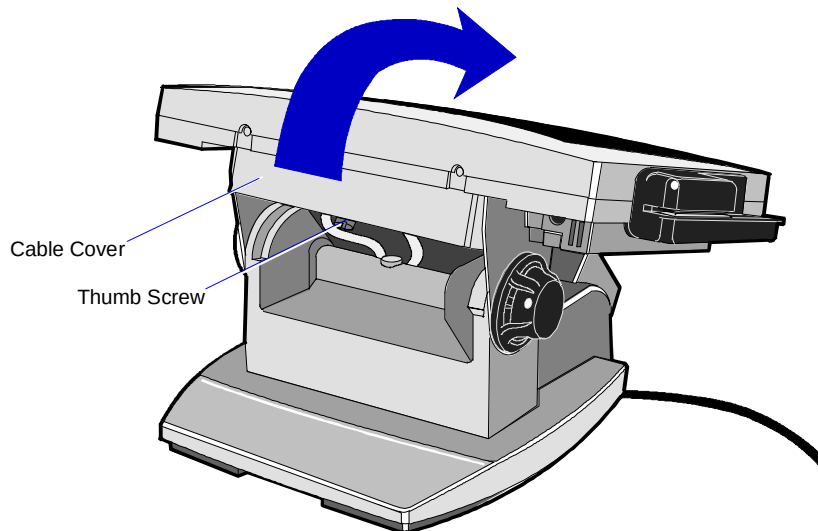
**Note:** All power data listed in table below is rated in amperage.

| Item Description                                                                 | 3.3VDC      | 5.0VDC      | 12VDC       | Requires external power source |
|----------------------------------------------------------------------------------|-------------|-------------|-------------|--------------------------------|
| Power Supply (85 Watts 497-0415503)                                              | 4.10        | 7.80        | 2.70        |                                |
| Summa POS Motherboard with CPU, & up to 128MB Memory                             | 2.00        | 3.00        | 0.04        |                                |
| Personality Board - 7454                                                         |             | 0.20        |             |                                |
| Power available for Peripherals                                                  | <b>2.10</b> | <b>4.60</b> | <b>2.66</b> |                                |
| <b>LCDs:</b> Samsung TFT (006-8603280 or 006-8604312), or Sharp DSTN 006-8601845 | 0.29        |             | 0.80        |                                |
| <b>MSR Modules</b>                                                               | 0.00        | 0.00        | 0.00        |                                |
| <b>Touch Screen</b> feature                                                      |             | 0.25        |             |                                |
| <b>Remote speakers</b>                                                           |             |             | 0.33        |                                |
| <b>Cash Drawer</b>                                                               | 0.00        | 0.00        | 0.00        |                                |
| (no more then one simultaneous opening)                                          |             |             |             |                                |
| <b>Printers</b> (always require brick)                                           | 0.00        | 0.00        | 0.00        | X                              |
| <b>2337-K002</b> Sampo 12.1" color LCD - analog interface (497-0415562)          |             |             |             | X                              |
| <b>7452-K419</b> COMPAL 15" Color CRT (497-0414127)                              |             |             |             | X                              |
| <b>External CD-ROM Drive</b> (Parallel, 2336-K024, 497-0416287)                  | 0.00        | 0.00        | 0.00        | X                              |
| <b>7880</b> Scanner/Scale                                                        |             |             |             | X                              |
| <b>7872</b> Scanner/Scale                                                        |             |             |             | X                              |
| <b>7875</b> Bi-Optic Scanner                                                     |             |             |             | X                              |
| <b>7452-K891</b> CCD Hand Held Scanner (008-0221512)                             |             |             |             | X                              |
| Safety - Contingency                                                             | 0.20        | 0.50        | 0.30        |                                |
| Power available for Peripherals                                                  | <b>1.61</b> | <b>3.85</b> | <b>1.23</b> |                                |
| <b>Hard Disk Drive</b> 2.5"                                                      |             | 0.50        |             |                                |
| <b>CD-ROM</b> (TEAC, 24X) 006-8603220 C                                          |             | 1.00        |             |                                |
| <b>Keyboards</b>                                                                 |             | 0.20        |             |                                |
| <b>Display 4x20 VFD</b> Powered from Parallel Port                               |             | 1.00        |             |                                |
| <b>Display 4x20 VFD</b> Powered from Serial Port                                 |             |             | 0.45        |                                |
| <b>Display 4x20 VFD</b> Int'l, Powered from Parallel Port (008-0221541)          |             | 2.00        |             |                                |
| <b>Display 2x20 VFD</b> Powered from Serial Port                                 |             |             | 0.50        |                                |
| <b>USB to 4 port RS-232</b>                                                      |             | 0.50        |             |                                |

| Item Description                                    | 3.3VDC | 5.0VDC | 12VDC | Requires external power source |
|-----------------------------------------------------|--------|--------|-------|--------------------------------|
| (2336-K008, 497-0413014)                            |        |        |       |                                |
| <b>USB to 2 port RS-232</b>                         |        | 0.50   |       |                                |
| (2336-K012, 497-0413710)                            |        |        |       |                                |
| <b>PCMCIA Controller</b>                            | 0.40   |        |       |                                |
| <b>IRDA</b>                                         |        | 0.50   |       |                                |
| <b>5992</b> Signature capture device (497-0417590)  |        |        | 0.80  |                                |
| <b>5945</b> Electronic Payment Device (497-0411818) |        |        | 0.50  |                                |
| <b>7837</b> Hand held Scanner                       |        |        | 0.30  |                                |
| <b>7892</b> Presentation Scanner                    |        |        | 0.50  |                                |
| <b>7882</b> Scanner                                 |        |        | 0.60  |                                |

## Cable Routing Considerations

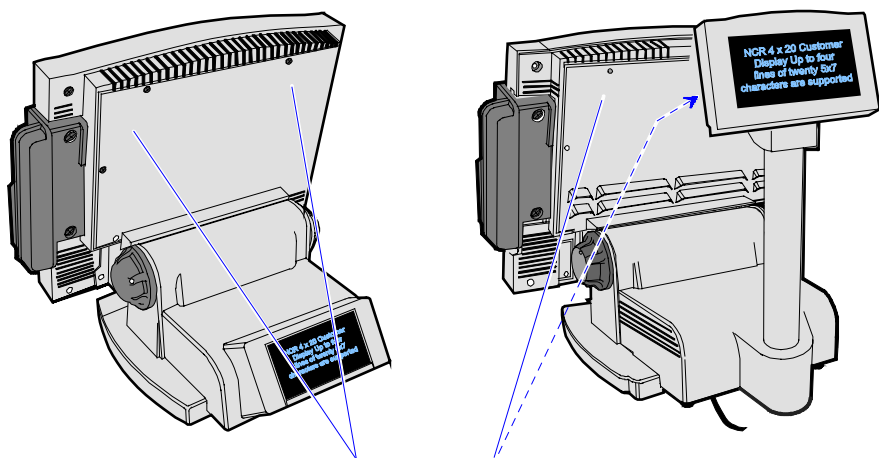
The Core Module's cable connectors are located on the underside of the Core Module, under the Cable Cover. Cables can be routed out the back of the Table-Top Mount.



## Considerations for Enclosed Installations

### Thermal Test Points

With the terminal installed in the enclosure, verify that the temperature does not exceed 45° C (115° F) in the operating environment. Thermal test points are shown below:



Thermal Test Points  
(Case over Hard Drive and Processor)

18055a

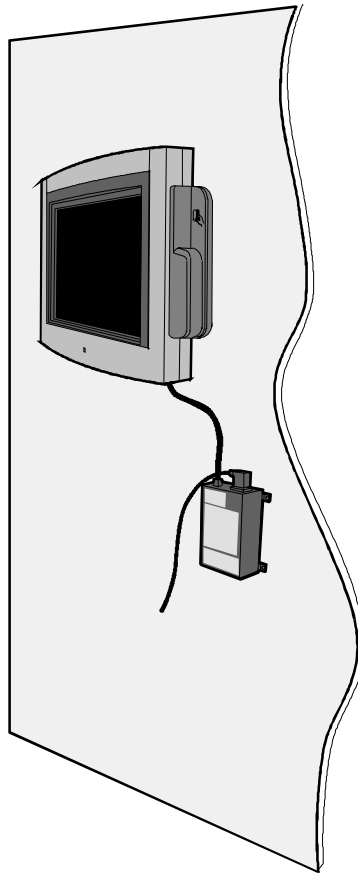
**Note:** For terminal servicing information refer to *NCR 7454 Retail Terminal Hardware Service Guide* (B005-0000-1342).

### Service Access

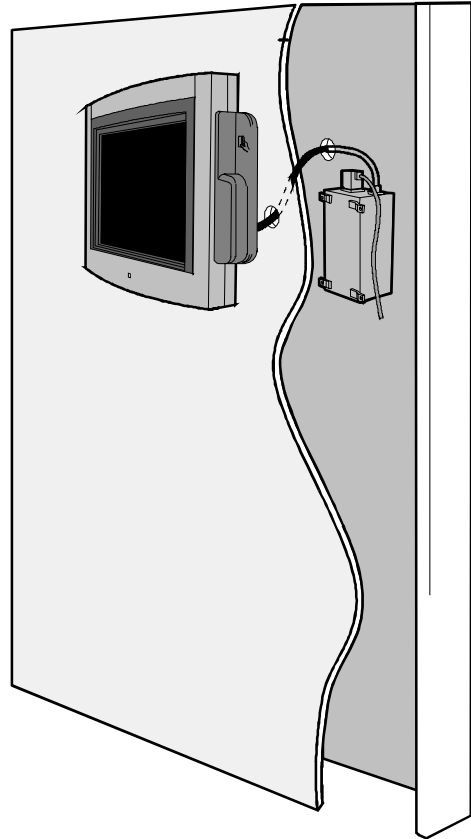
The enclosure must provide access to certain locations for service purposes.

## Flush Wall Mount

The 7454 can be mounted flush against a wall. The following shows mounting configuration and brackets:



Flush Mount w/Power Supply  
Mounted on the Outside Wall

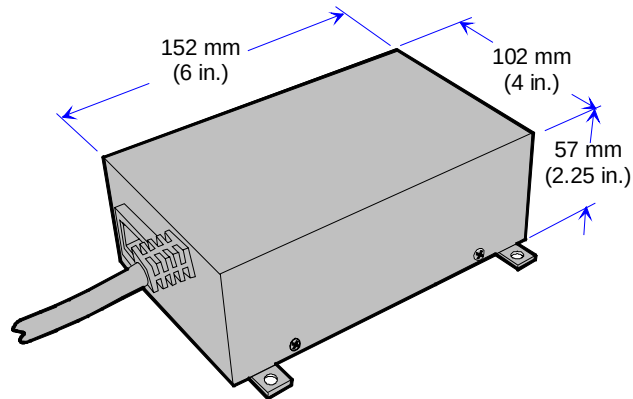


Flush Mount w/Power Supply  
Mounted on the Inside Wall

16683

**Note:** Refer to the *Cable Illustrations* section for cable pass-through hole sizes.

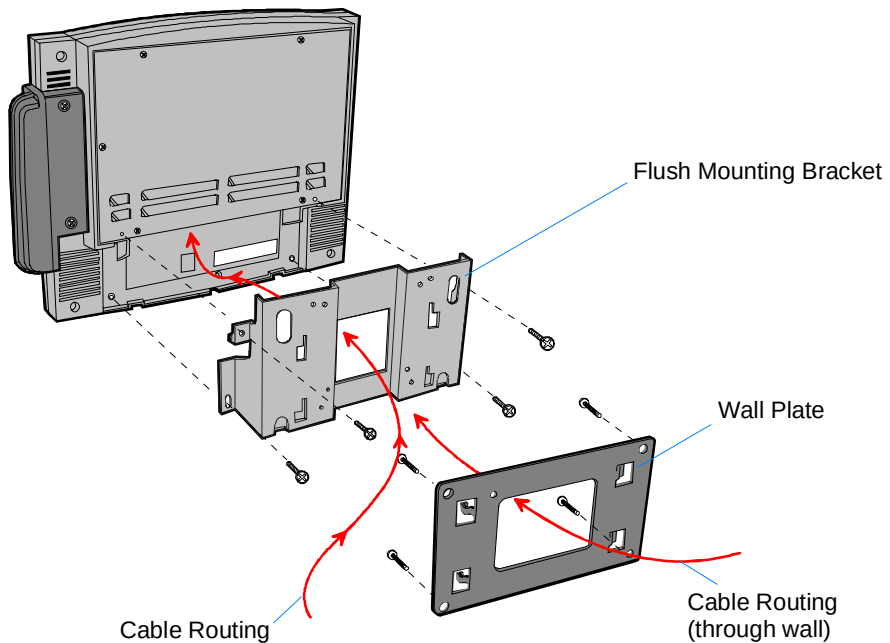
## Power Supply



17406

## Wall mount the Terminal Bracket

Drill a hole in the wall for the cables if you are mounting the power supply on the opposite side of the wall.



16684

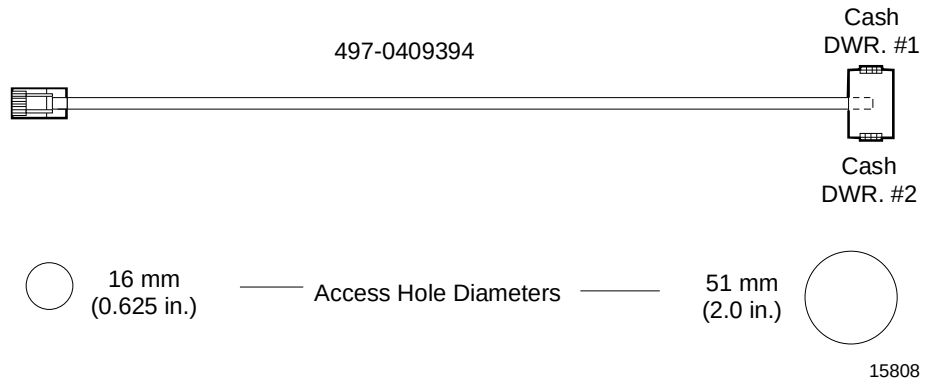
## System Cables

| Cable Type        | Cable Name                                | NCR Part No.                | Corp. ID No.   | Approximate Cable Length |
|-------------------|-------------------------------------------|-----------------------------|----------------|--------------------------|
| Cash Drawer       | Dual Drawer, Y cable                      | 497-0409394                 | 1416-C372-0006 | 0.6 m / 2 ft.            |
| Communications    | Ethernet, 10 / 100Base-T                  | 497-0008623<br>(Unshielded) |                |                          |
|                   | USB                                       | 497-0415949                 | 1416-C528-0010 | 1 m / 3.3 ft.            |
|                   | USB                                       | 497-0415950                 | 1416-C528-0040 | 4 m / 13 ft.             |
| Displays          | Remote Customer Display (Parallel)        | 497-0405676                 | 1416-C278-0040 | 4 m / 13 ft.             |
|                   | Parallel I/F Cable (adapter cable)        | 497-0411000                 | 1416-C472-0006 | 0.6 m / 2 ft.            |
| Power             | U.S. – Straight                           | 006-1009037                 | 1416-C325-0030 | 3 m / 10 ft.             |
|                   | U.S. – Twist-lock                         | 250-0023191                 | 1416-C419-0030 | 3 m / 10 ft.             |
|                   | Intl. – straight 'bm' power               | 006-8601010                 | 1416-C323-0030 | 3 m / 10 ft.             |
|                   | Intl.                                     | 006-1012224                 | 1416-C411-0030 | 3 m / 10 ft.             |
|                   | SEV – straight 'bm' power                 | 006-8601011                 | 1416-C408-0030 | 3 m / 10 ft.             |
|                   | UK – straight 'bm' power                  | 006-8601012                 | 1416-C321-0030 | 3 m / 10 ft.             |
|                   | UK – Rectangular                          | 006-8601012                 | 1416-C409-0030 | 3 m / 10 ft.             |
|                   | Australia – straight 'bm' power           | 006-8601019                 | 1416-C322-0030 | 3 m / 10 ft.             |
|                   | Japan – Power Cord (US Style with T-Mark) | 006-8604879                 | 1416-C608-0030 | 3 m / 10 ft.             |
|                   | Japan – Twist-lock, straight 'bm' power   | 006-8601001                 | 1416-C393-0030 | 3 m / 10 ft.             |
| Printer Interface | 7193 / 7194 / 7158 Printer                | 497-0408349                 | 1416-C359-0007 | 0.7 m / 2 ft..           |
|                   |                                           | 497-0407943                 | 1401-C266-0040 | 4 m / 13 ft.             |
|                   |                                           | 497-0409379                 | 1416-C266-0152 | 15.2 m / 50 ft.          |
|                   | 7161 Printer                              | 497-0407427                 | 1416-C337-0010 | 1 m / 3.3 ft.            |
|                   |                                           | 497-0407429                 | 1416-C337-0040 | 4 m / 13 ft.             |
|                   |                                           | 497-0407430                 | 1416-C337-0152 | 15.2 m / 50 ft.          |
|                   |                                           | 497-0409379                 | 1416-C266-0152 | 15.2 m / 50 ft.          |

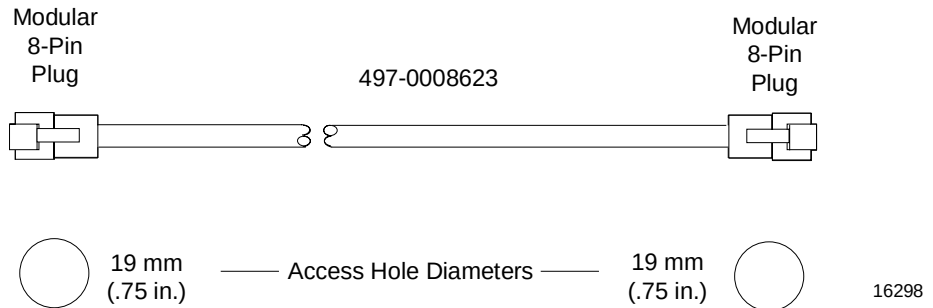
| Cable Type                               | Cable Name                               | NCR Part No. | Corp. ID No.   | Approximate Cable Length |
|------------------------------------------|------------------------------------------|--------------|----------------|--------------------------|
| Printer Extender Drop Cables (7453-K641) | 7161 / 7166 / 7196 Printer / Workstation | 497-0411815  | 1416-C417-0040 | 4 m / 13 ft.             |
|                                          | 7193 / 7194 Printer                      | 497-0411816  | 1416-C418-0040 | 4 m / 13 ft.             |
| Printer Power Supply                     | 7193 Printers                            | 497-0405937  | 1416-C286-0010 | 1 m / 3.3 ft.            |
|                                          | 7194 Printer                             | 497-0405945  | 1416-C286-0040 | 4 m / 13 ft.             |

## Cable Illustrations

### Dual Cash Drawer, Y-cable



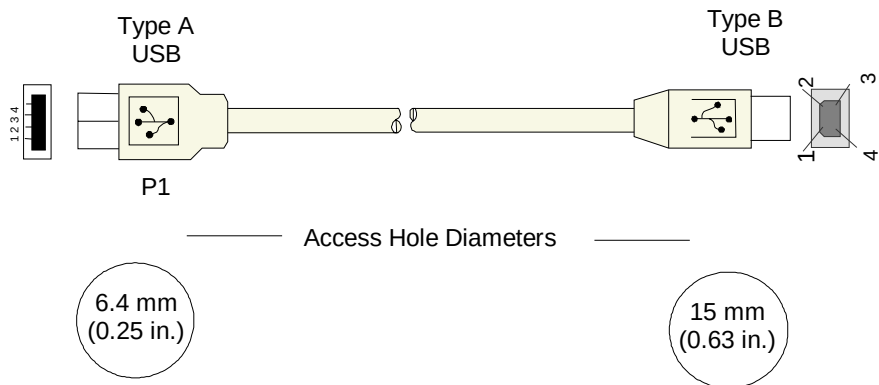
### Ethernet, 10/100 Base-T



## USB, 1- or 4-Meter

497-0415949 (1 meter)  
1416-C528-0010

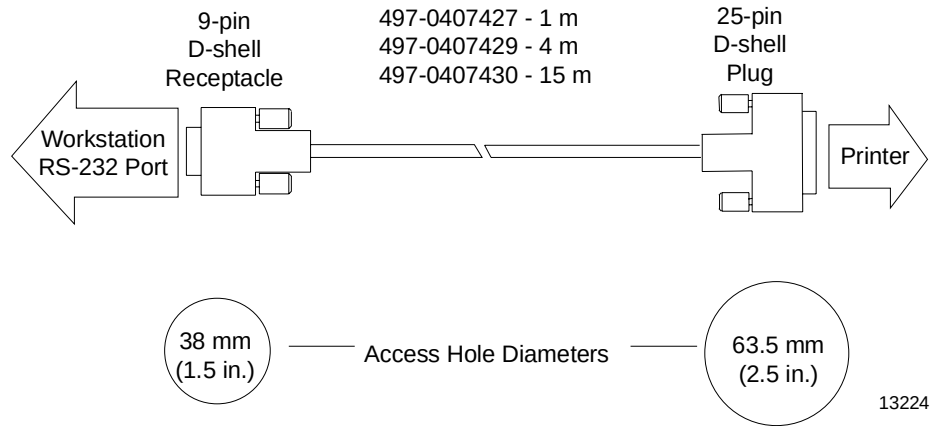
498-0415950 (4 meter)  
1416-C528-0040



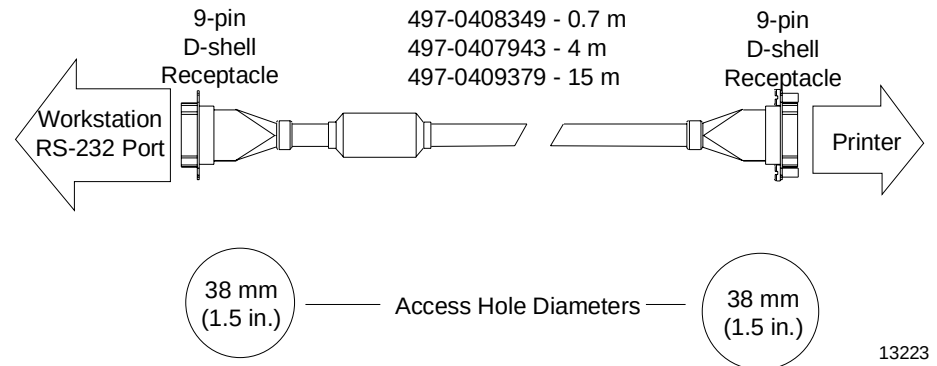
18433

## Printer Interface Cables (RS-232)

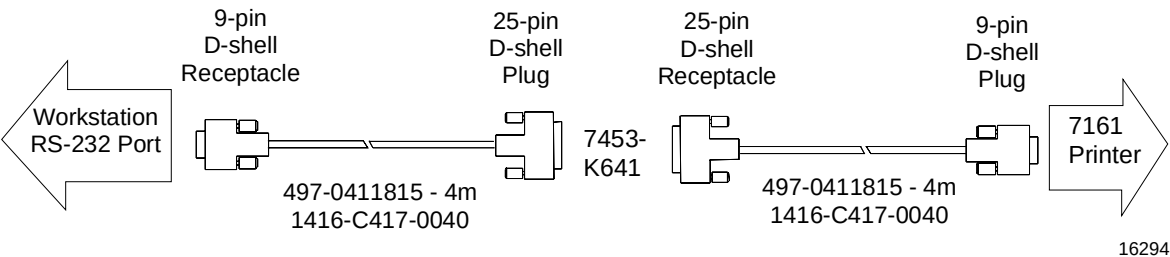
### 7161/7166/7196



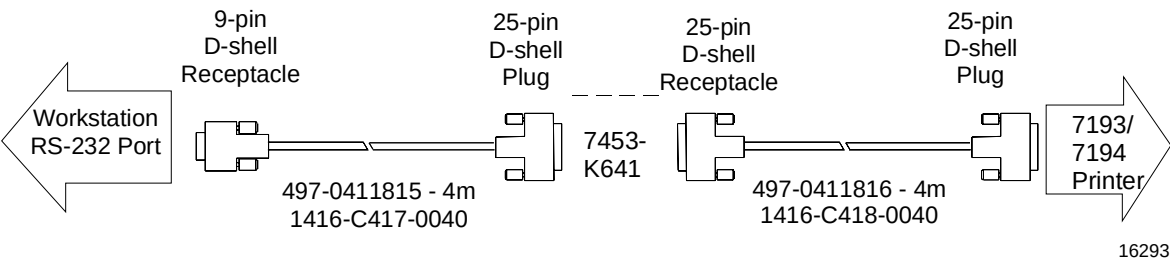
### 7193/7194/7158



**NCR 7161 Printer with 7454-K641 Cable Extender**

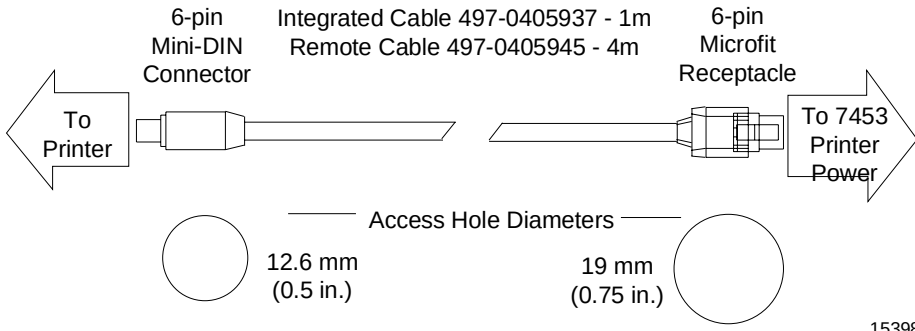


**NCR 7193 Printer with 7454-K641 Cable Extender**

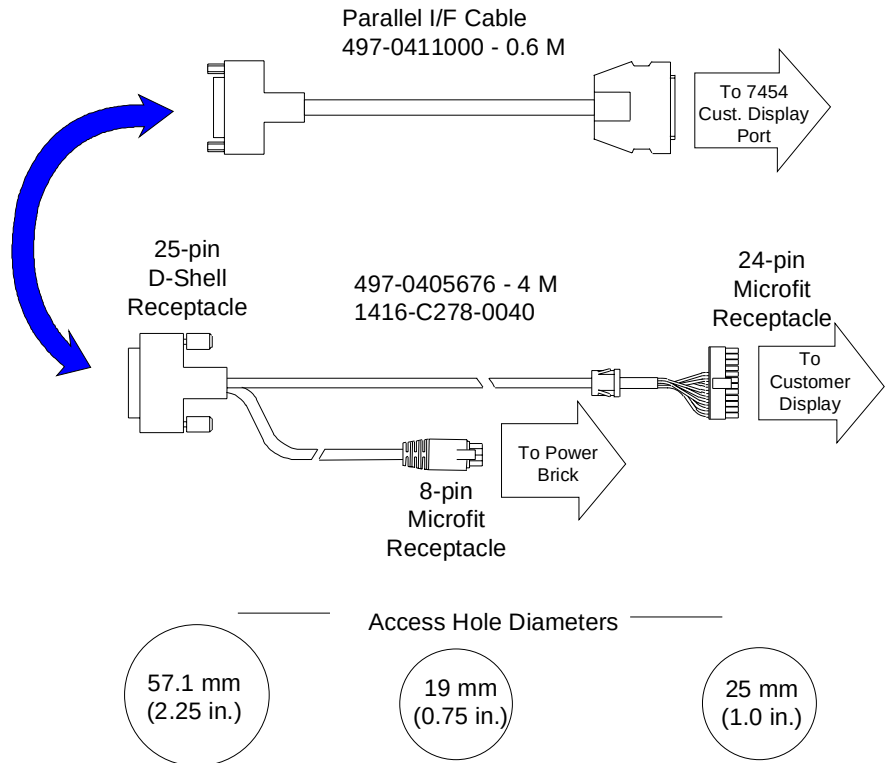


**Printer Power Cables**

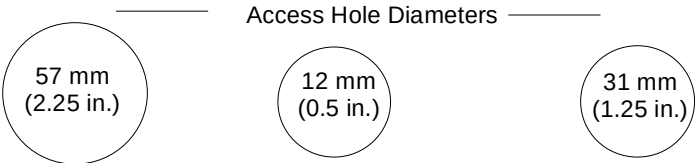
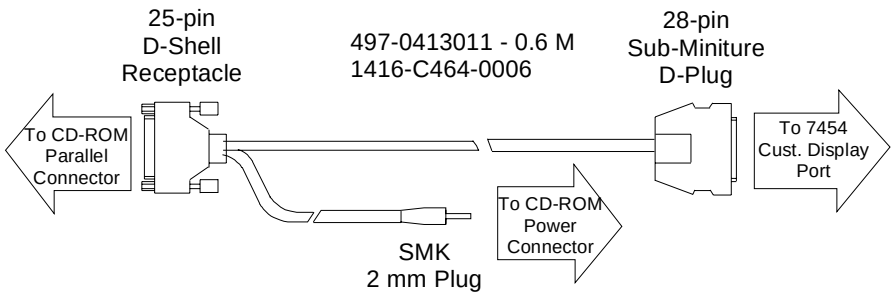
**NCR 7193 Printer**



## NCR 5972-1000 Remote Customer Display and Adapter Cables

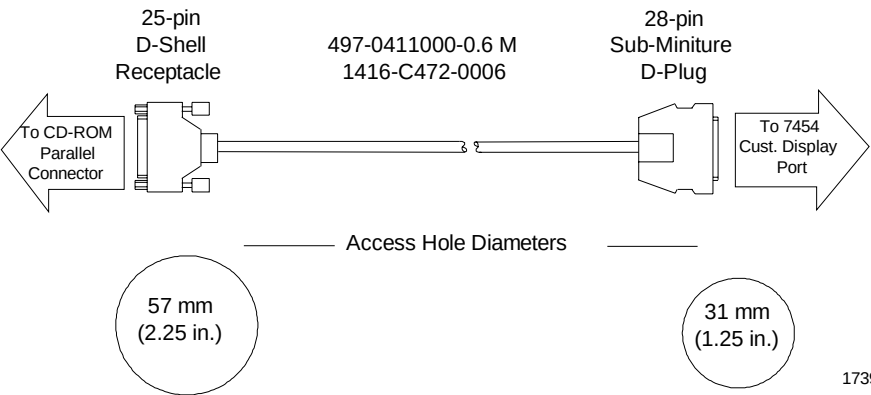


### External CD-ROM Cable



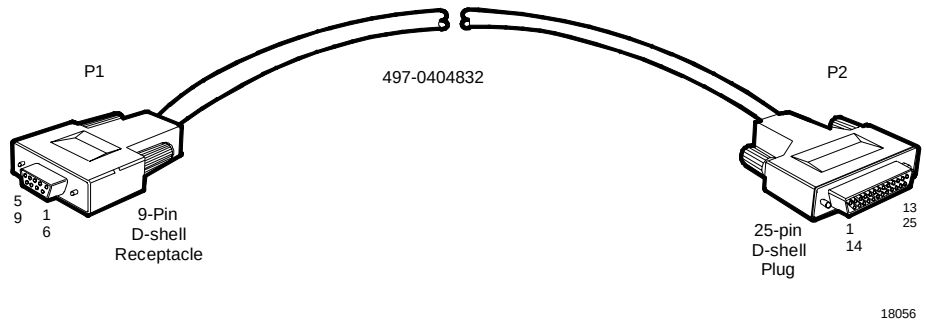
16959

### External Parallel Cable

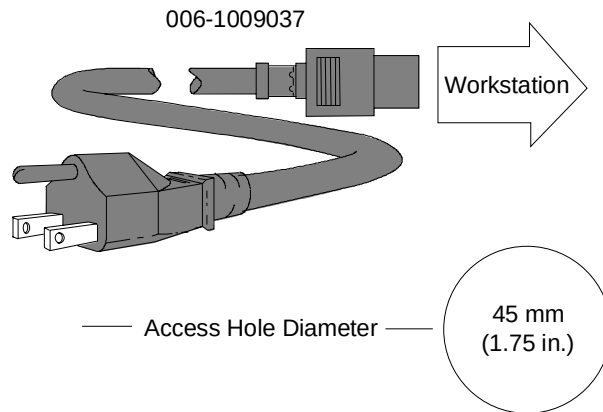


17390

### Automatic Change Dispenser Serial Cable



### Power, AC



# Environmental Requirements

## Barometric Pressure

The 7454 Retail Terminal is designed to operate within the following barometric pressure conditions:

- Maximum operating altitude: 3,000 m (9,843 ft.)
- Operating range of pressure: 105 kPa to 69 kPa (15.2 lb/in. to 10.0 lb/in.)

## Temperature

The 7454 Retail Terminal is designed to operate over the temperature ranges shown below. Continuous operation must be avoided, however, at or near the temperature extremes, or in locations where temperature changes exceed the temperature restrictions.

| Temperature Parameter | Restriction                                 |
|-----------------------|---------------------------------------------|
| Operating             | 5°C to 45°C (41°F to 113°F), dry bulb       |
| Storage               | -10°C to 50°C (14°F to 122°F), three months |
| Shipping              | -40°C to 60°C (-40°F to 140°F), one week    |
| Dew Point             | 26°C (79°F) maximum                         |

## Humidity

The 7454 Retail Terminal is designed to operate within the humidity ranges shown below. Continuous operation must be avoided, however, at or near the humidity limits, or in locations where humidity changes exceed the humidity restrictions. In no case should the 7454 Retail Terminal be subjected to condensation.

| Humidity Type       | Restriction                                |
|---------------------|--------------------------------------------|
| Relative            | 10% to 90%                                 |
| Maximum change rate | 10% / 60 minutes                           |
| Storage             | 10% to 90% relative humidity, three months |
| Shipping            | 5% to 95% relative humidity, one week      |



---

# Appendix A: Transient Protection

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## AC Power Line Transient Protection

In the process of power distribution, transient electrical energy (including, but not limited to, lightning strikes, intermittent short circuits, and switching transients) can be introduced onto power lines. Such transient energy can be very damaging to electronic hardware, and can also cause data corruption. Under these circumstances, NCR recommends the use of AC power transient suppressors. Such protection devices are intended to guard against power line transients that can result in hardware damage and various system or program errors.

Improvement of any deficiencies in power quality is a customer responsibility. Malfunction and/or component failure as a result of power quality problems is not covered by the NCR Maintenance Agreement. NCR accepts no liability for any such occurrence or for its consequences.

When power transient suppression is required, the suppressors used should meet the following minimum requirements:

- Dissipate energy to match the appropriate application categories as defined by IEEE Standard 587.
- Be of the voltage limiting (clipping), or tracking filter type. The suppressor must not clamp the voltage to zero, and must self-recover after the passage of the transient. The suppressor may be of the hybrid type construction that makes use of various technologies in order to meet speed and dissipation requirements.
- Upon failure, exhibit a positive indication of its failure such as a blown fuse or tripped breaker.

- Be listed by the accepted safety organization for the country involved (UL, CSA, VDE, ETL, and so on) and the installation must conform to local, state, and national electrical codes and regulations.

## Data Line Transient Protection

The nature of the transient phenomenon may extend to the data communication lines connected to this equipment. It is the responsibility of the customer to install and connect a data line transient suppression system to correct or prevent any deficiencies. Such systems must meet the following minimum requirements:

- Be of the voltage limiting type and must self-recover after passage of the transient.
- Insert less than 5 ohms resistance and minimal inductive and capacitive loading at the operating frequency for data lines, in order to avoid signal degradation.
- Be installed in accordance with all applicable local, state, and national electrical codes and regulations.

**Note:** In certain countries, NCR is able to supply both power and data line transient suppressors as well as a comprehensive line of power conditioning equipment. For application data, contact your NCR Customer Services Division Representative.





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